

Claims

1. A $G_{\alpha q}$ -Gustducin chimeric G-protein.
2. The chimeric $G_{\alpha q}$ -Gustducin of claim 1 characterised in that it is a $G_{\alpha 15}$ or 16 -Gustducin protein
3. The chimeric G-protein of claim 1 or claim 2 wherein at least the last 5 amino acids of the $G_{\alpha q}$ are replaced by a corresponding number of amino acids of Gustducin.
4. The chimeric G-protein of claim 3 wherein the last 44 amino acid sequences of the $G_{\alpha q}$ is replaced with a 44 amino acid unit of Gustducin.
5. A chimeric G-protein according to claim 1 having an amino acid sequence set forth in the SEQ ID 2.
6. A G-protein according to claim 1 encoded for by a nucleic acid comprising a nucleotide sequence set forth in SEQ ID 1
7. A nucleic acid comprising the nucleotide sequence set forth in SEQ ID 1 encoding for a G-protein defined in claim 1.
8. An expression vector comprising nucleic acid comprising the nucleotide sequence set forth in SEQ ID 1 encoding for a G-protein defined in claim 1.
9. A host cell transfected with an expression vector as defined in claim 8.
10. The host cell of claim 9 stably expressing the chimeric G-Protein and a taste receptor.
11. A method of producing a chimeric G-protein as defined in claim 1, comprising the step of culturing host cells having contained therein an expression vector encoding for the chimeric G-protein, under conditions sufficient for expression of said G-protein, thereby causing production of the protein, and recovering the protein produced by the cell.
12. A method of analysis and discovery of modulators of taste receptors, using the chimeric proteins defined in claim 1.
13. A method of analysis and discovery of modulators of taste receptors, selected from the group of bitter taste receptors, sweet taste receptors, and umami taste receptors, using the chimeric proteins defined in claim 1.

14. Method according to claim 12 employing a mammalian cell-based assay employing a transfected gene or cDNA encoding a chimeric protein of the invention and a taste receptor, the method comprising the steps of contacting a compound with cells, and determining the functional effect of the compound on the receptor:chimeric G-protein complex.
15. A method according to any one of claims 12 to 14 wherein the functional effect is determined by measuring the changes in intracellular messengers such as IP3 or calcium²⁺.